

REMARKS

The Examiner is thanked for the Office Action mailed January 20, 2004. This amendment and request for reconsideration is intended to be fully responsive to the Office Action.

In the Office Action, claims 1-2, and 10-14 were rejected under 35 U.S.C. 103(a) as being unpatentable over JA 10-76837 in view of U.S. Patent 5,291,941 to Enomoto (Figure 8), and further in view of either U.S. Patent 3,910,345 to Whalen or JP 59-241234 to Monmose. Claims 8 and 9 were rejected under 35 U.S.C. 103(a) as being unpatentable over JA '837 in view of Enomoto '941 and further in view of Whalen '345 or Monmose '234 and (even) further in view of U.S. Patent 5,971,290 to Echigoya. These rejections are respectfully traversed in view of the above amendments and the following remarks.

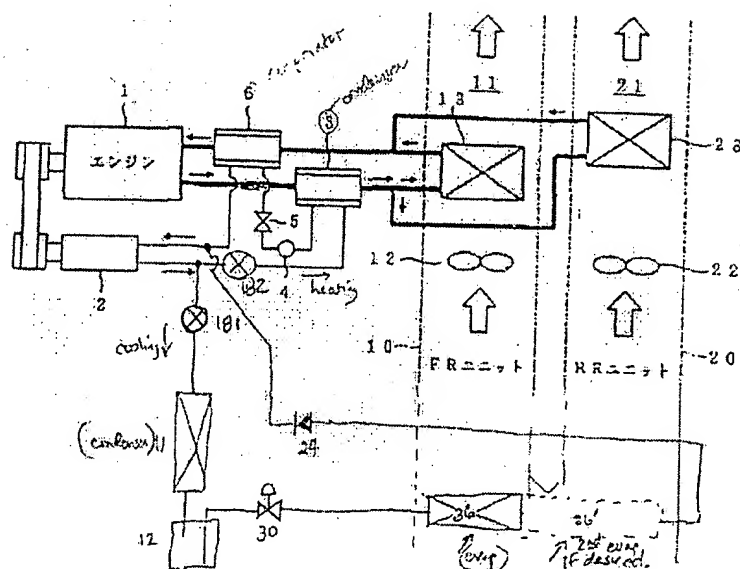
Independent claims 1 and 12 have been rejected based on JA '837 in view of Enomoto (Figure 8), and further in view of either Whalen or Monmose. JA '837 describes a heater system with two heater cores 13 and 23 that are designed to be installed in the front and rear of an automobile to improve heater performance. The Examiner indicates that it would be obvious to graft a refrigerant-based air conditioning system onto the heater system so that the two systems overlap to share a compressor. However, the claimed switching system is not disclosed in JA '837 or Enomoto. The Examiner refers to the switching system comprising valves 181, 182 disclosed in Enomoto Figure 8, however, the disclosed valves are two way (open or closed) valves,

whereas to function as suggested by the Examiner's sketch, the valves 181, 182 would have to be automated 3 way valves. The valves 181, 182 would also have to be automated to function based on different criteria, since Enomoto Figure 8 does not disclose an operatively attached engine cooling circuit and the Enomoto heating circuit consists only of a condenser (heat exchanger 37), rather than a condenser 20 and an evaporator 16, as disclosed in Figure 1 of the current invention, and as disclosed in JA '837. Multiple other variations exist that distinguish the Enomoto switching means 181, 182 from the switching means disclosed in the current invention, and render the switching means unworkable in combination with the engine cooling circuit and heat pump circuit disclosed in JA '837.

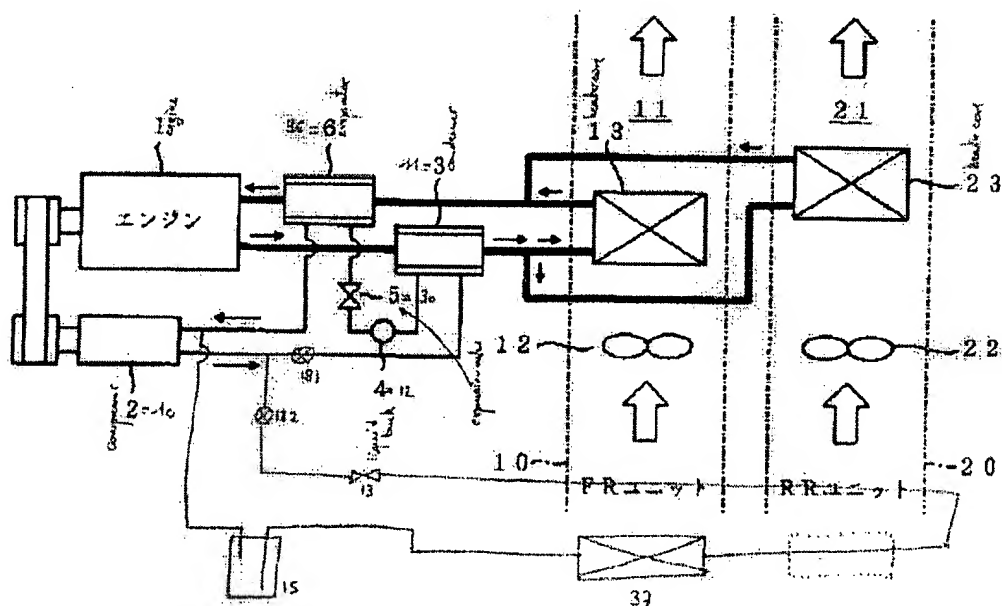
The Examiner indicates that the motivation to combine would be to supply air conditioning to "preserve occupant comfort." However, that statement does not address the need for a teaching found in the prior art that suggests combining the specific prior art components to realize the present invention. There are multiple ways to air condition an automobile – why would one of ordinary skill in the art combine these references to provide air conditioning in this way. Specifically, why would one of ordinary skill in the art be motivated to dismantle the system described in Enomoto and graft it on to the heater described in JA '837, and where is this motivation suggested in the prior art?

Indeed, even if one of skill in the art modified JP 10-76837 in the manner suggested by the Examiner, such combination would not achieve the presently claimed

invention. The Examiner sketch is reprinted below.

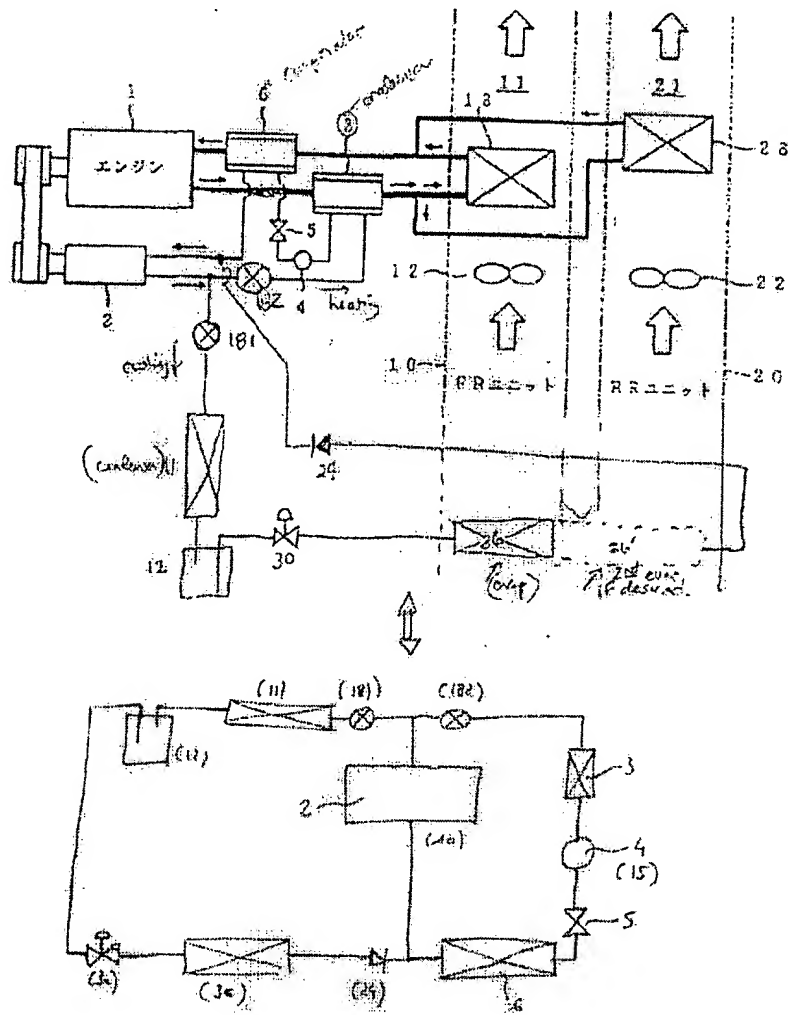


Contrary to the Examiner's assertion, if one of skill in the art modified JP 10-76837 in view of Enomoto (U.S. Patent 5,291,941), the resulting system would take the following form. The hand-written portions relates to Enomoto '941.



From the foregoing sketch, it is clear that the combination suggested by the Examiner would not result in the system of the pending claims.

Another way to view the system developed by the Examiner to make the present rejection based on JP 10-76837 and Enomoto '941 is reprinted below showing the Examiner's sketch and an alternative equivalent sketch of the same system.

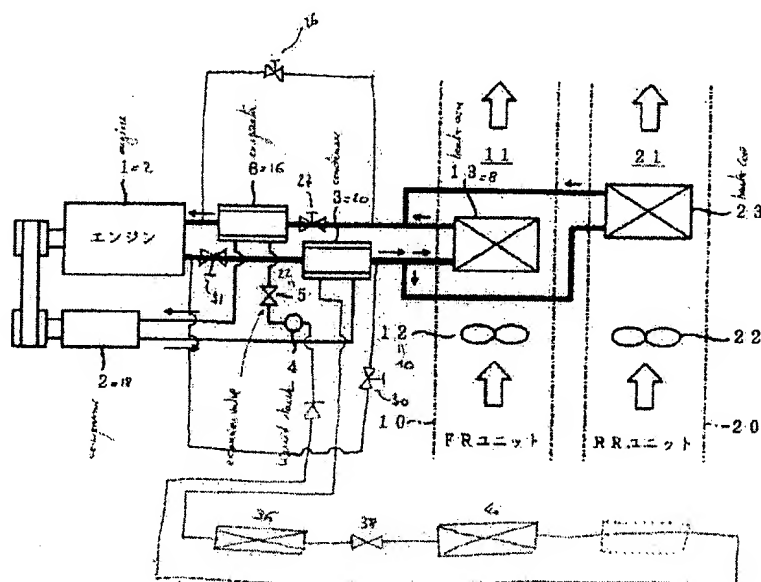


From the foregoing sketch, it is clear that the combination suggested by the Examiner fails to render obvious “a switching device making it possible to make the refrigerant fluid circulate either in the air-conditioning branch, or in the heat-pump branch, is such a way as to form a heat-pump loop” as recited in claim 1.

Moreover, the combination suggested by the Examiner fails to render obvious “a first valve system operatively connected to a heat source and fluidly connected to said

first evaporator, said first valve system controlling the amount of heat transferred to said evaporator and thereby controlling an inlet pressure to said compressor” as set forth in dependent claim 15 as well as the other valve arrangements set forth in claims 16-23.

In actuality, one of skill in the art would have to modify the teaching of JP 10-76837 in the following manner to achieve the structure of the currently claimed invention.



However, the prior art submitted by the Examiner to modify JP 10-76837 fails to teach or render obvious the features shown above. Even if some of the concepts illustrated above are known in the prior art, there is motivation to modify JP 10-76837 to achieve the system shown above.

The modular-type modification suggested by the Examiner would not occur to one of ordinary skill in the art. “To imbue one of ordinary skill in the art with knowledge of the invention in suit, when no prior reference or references of record convey or suggest that knowledge is to fall victim to the insidious effect of a hindsight

syndrome wherein that which only the inventor taught is used against the teacher.” See *W. L. Gore & Associates v. Garlock, Inc.*, 220 USPQ 303, 312, 313 (Fed Cir. 1983). The Examiner has simply reconstructed the Applicant’s claimed invention based on the applicant’s own teaching. This type of obviousness analysis/determination is not proper.

New claims 15-22 are being presented in this Amendment. New claims 15 and 17-22 are readable on the elected species of Figure 3. New claim 16 is readable on the non-elected species of Figure 1.


New claims 15-22 have been added in this amendment. New claim 15 recites an evaporator heat regulating loop defined by an evaporator valve 27, an evaporator bypass valve 26, and first evaporator 16. New claim 15 and 17 are directed to the subject matter of the elected species shown in Figure 3. Non-elected claim 16 recites the heat source 23 shown in Figure 1. Support for new claims 15-17 is found on page 7, lines 9-17, and on page 9, lines 2-15 of the current specification, and in Figures 1 and 3 of the drawings.

New elected claims 18-21 claim the relationship between the engine cooling loop 4 and the condenser 20. Specifically, claims 18-21 describe the operation of the condenser valve 30, the condenser bypass valve 31, and the heat exchanger 21 in providing the “top up” heating capability of the system. Claims 18-22 are supported by the elected species shown in Figure 3. Support for claims 18-21 is found on page 8,

lines 5-27, and on page 9, lines 24-35 of the current specification, and in Figure 3 of the drawings. New Claim 22 and amended claim 12 claims the joint operation of the evaporator valve system 26, 27 and the condenser valve system 30, 31, in controlling the intake pressure of the compressor 18.

It is respectfully submitted that this application is in condition for allowance and notice to that effect is earnestly solicited. Should the Examiner believe additional discussion would advance the prosecution of the instant application, he is invited to contact the undersigned.

Respectfully submitted:
Liniak, Berenato & White

By: 
Matthew Stavish
Reg. No. 36,286

Suite 240
6550 Rock Spring Drive
Bethesda, MD 20817
301-896-0600